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United States Department of Energy
Office of Fissile Materials Disposition
PO Box 23786
Washington, DC 20026-3786

Sirs:

I am writing to comment on the Supplement to the Draft Surplus Plutonium Disposition Environmental Impact Statement.

As an Oklahoma resident who remember only too well the carelessness with which plutonium was handled at the Kerr-McGee plant in Crescent, I view the whole MOX plan as unrealistic for human beings to use.

1

The MOX plan would cause plutonium to be considered as a business commodity to be transported across the country rather than the highly toxic substance which it is and which needs to be isolated from the human environment.

2

To claim that the MOX plan would result in a significant reduction in the amount of plutonium is patently ridiculous. There would be a very small net reduction if plutonium were used in a mixed fuel in nuclear power plants.

The MOX plan for dealing with "surplus plutonium" is a plan to play with the stuff rather than to immobilize it, and it is my understanding that MOX would be a very expensive toy.

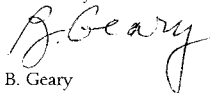
3

How much would it cost to retrofit aging reactors so that they could utilize the MOX fuel? At what point would safety concerns take a back seat to economic considerations? Accidents would be more likely, I believe, at a retrofitted plant, and they would certainly be far more dangerous.

Any serious problems with nuclear power would only be exacerbated with the use of MOX. It is simply terrifying to think of such casual use of plutonium in the U.S., where control is imperfect. What about in Russia? MOX would be a bad choice for the U.S. public, for the nuclear power industry, and for the planet. Get real!

4

Yours truly,


B. Geary

MR020

MR020-1

MOX Approach

DOE acknowledges the commentor's opposition to the MOX approach. DOE has identified as its preferred alternative the hybrid approach. Pursuing both immobilization and MOX fuel fabrication provides the United States important insurance against potential disadvantages of implementing either approach by itself. The hybrid approach also provides the best opportunity for U.S. leadership in working with Russia to implement similar options for reducing Russia's excess plutonium in parallel. Further, it sends the strongest possible signal to the world of U.S. determination to reduce stockpiles of surplus plutonium as quickly as possible and in a manner that would make it technically difficult to use the plutonium in nuclear weapons again.

MR020-2

Transportation

Transportation would be required for both the immobilization and MOX approaches to surplus plutonium disposition. Transportation of special nuclear materials, including fresh MOX fuel, would use DOE's SST/SGT system. Since the establishment of the DOE Transportation Safeguards Division in 1975, the SST/SGT system has transported DOE-owned cargo over more than 151 million km (94 million mi) with no accidents causing a fatality or release of radioactive material. The transportation requirements for the surplus plutonium disposition program are also evaluated in Chapter 4 of Volume I and Appendix L.

MR020-3

MOX Approach

It is true that in the MOX approach only a fraction of the plutonium would actually be consumed in the reactor; but the remainder would be an integral part of massive spent fuel assemblies. The spent fuel assemblies would be so large and radioactive that any attempted theft of the material would require a dedicated team willing to suffer large doses of radiation, along with substantial equipment for accessing and removing the spent fuel from the storage facility and carrying it away.

The purpose of fabricating MOX fuel and using it in domestic, commercial reactors is to safely and securely disposition surplus plutonium by meeting the Spent Fuel Standard. The Spent Fuel Standard, as identified by NAS and

modified by DOE, is to make the surplus weapons-usable plutonium as inaccessible and unattractive for weapons use as the much larger and growing quantity of plutonium that exists in spent nuclear fuel from commercial power reactors. The MOX facility would produce nuclear fuel that would displace LEU fuel that utilities would have otherwise purchased. If the effective value of the MOX fuel exceeds the cost of the LEU fuel that it displaced, then the contract provides that money would be paid back to the U.S. Government by DCS based on a formula included in the DCS contract.

The commercial reactors selected for the MOX approach include only those reactors whose operational life is expected to last beyond the life of the surplus plutonium disposition program. Furthermore, although no U.S. commercial reactors are licensed to use plutonium-based fuel, several are designed to use MOX fuel, and others can easily and safely accommodate a partial MOX core.

The environmental, safety and health consequences of the MOX approach at the proposed reactors are addressed in Section 4.28. In addition, NRC would evaluate license applications and monitor the operations of both the MOX facility and domestic, commercial reactors selected to use MOX fuel, to ensure adequate margins of safety.

MR020-4

Nonproliferation

DOE acknowledges the commentator's opposition to the use of plutonium in MOX fuel. The *Joint Statement of Principles* signed by Presidents Clinton and Yeltsin in September 1998 provide general guidance for achieving the objectives of a future bilateral agreement to disposition surplus plutonium in the United States and Russia. Sensitive negotiations between the two countries have indicated that the Russian government accepts the technology of immobilization for low-concentration, plutonium-bearing materials, but that the MOX approach would be considered for higher-purity feed materials.

The remainder of this comment is addressed in response MR020-3.